IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF NEW YORK

SEOUL SEMICONDUCTOR CO., LTD., a Korean corporation, SEOUL VIOSYS CO., LTD., a Korean corporation,

Plaintiff,

v.

SATCO PRODUCTS, INC.,

Defendant.

COMPLAINT FOR PATENT INFRINGEMENT

Case No. _____
JURY TRIAL DEMANDED

Plaintiffs Seoul Semiconductor Co., Ltd. ("Seoul Semiconductor") and Seoul Viosys Co., Ltd. ("Seoul Viosys"), (collectively "Plaintiffs") for their Complaint against Defendant Satco Products, Inc. ("Satco") allege as follows:

INTRODUCTION

- 1. Plaintiffs bring this patent infringement action to protect their valuable patented technology relating to light-emitting diode (LEDs) and LED lighting. An LED is a semiconductor device that converts electrical energy into light. LEDs have many advantages over conventional light sources, including lower energy consumption, longer lifetime, and smaller size.
- 2. Seoul Semiconductor was founded in 1992 with around 30 employees in a small space of a commercial building in Bongchen-dong, Seoul. From those 30 employees, Seoul Semiconductor grew into one of the largest manufacturers of LEDs in the world. Seoul Viosys is also a leading company in the LED industry and an affiliate company of Seoul Semiconductor.

3. Seoul Semiconductor's success is in large part due to its significant investment in innovation and respect for intellectual property. Seoul Semiconductor has invested in research and development ("R&D") for the last two decades. Seoul Semiconductor invests over 10% of sales revenue into R&D and owns one of the largest LED patent portfolios in the world, which includes more than 10,000 patents worldwide.

THE PARTIES

- 4. Plaintiff Seoul Semiconductor is a company organized and existing under the laws of the Republic of Korea, with its principal place of business at 1B-25, 727, Wonsi-dong, Danwon-gu, Ansan-city, Gyeonggi-do, Korea 425-851.
- 5. Plaintiff Seoul Viosys is a company organized and existing under the laws of the Republic of Korea, with its principal place of business at 65-16, Sandan-ro 163 beon-gil, Danwon-gu, Ansan-city, Gyeonggi-do, Korea 425-851.
- 6. On information and belief, Satco is a company organized and existing under the laws of the State of New York with its principal place of business located at 110 Heartland Blvd., Brentwood, New York 11717.
- 7. On information and belief, Satco is in the business of offering for sale, selling and distributing lighting products including light products based on light-emitting diode (LED) technology.
- 8. Satco sells S9152, which is a LED lamp. An image of the S9152 is provided below.



9. Satco sells S9542, which is a LED lamp. An image of the S9542 is provided below.



JURISDICTION AND VENUE

10. This is an action for patent infringement, under the Patent Laws of the United States of America, 35 U.S.C. §271 *et seq.* This Court has subject matter jurisdiction under 28 U.S.C. §8 1331 and 1338(a).

- 11. This Court has personal jurisdiction over Satco because, among other things, Satco is a New York corporation, has its principal place of business in New York, and conducts business in the Eastern District of New York.
- 12. Venue is proper within this judicial district under 28 U.S.C. § 1400 because Satco resides in this judicial district and/or Satco has committed acts of infringement in this judicial district and has a regular and established place of business within this judicial district.

THE PATENTS IN SUIT

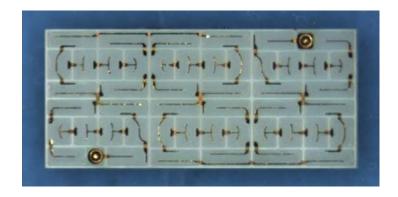
- 13. On May 29, 2012, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,188,489 ("the '489 Patent"), entitled "Light Emitting Diode for AC Operation" to Lee *et al.* Seoul Viosys is the owner by assignment of the '489 Patent. A true and correct copy of the '489 Patent is attached hereto as <u>Exhibit 1</u>.
- 14. On September 28, 2010, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,804,098 ("the '098 Patent"), entitled "Light Emitting Element With a Plurality of Cells Bonded, Method of Manufacturing the Same, and Light Emitting Device Using the Same" to Lee *et al.* Seoul Viosys is the owner by assignment of the '098 Patent. A true and correct copy of the '098 Patent is attached hereto as Exhibit 2.
- 15. On January 12, 2010, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,646,031 ("the '031 Patent"), entitled "Light Emitting Device having Light Emitting Elements" to Sakai *et al.* Seoul Semiconductor is the owner by assignment of the '031 Patent. A true and correct copy of the '031 Patent is attached hereto as Exhibit 3.
- 16. On December 2, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,901,575 ("the '575 Patent"), entitled "AC Light Emitting Diode and Method For Fabricating the Same" to Lee. Seoul Viosys is the owner by assignment of the '575 Patent. A true and correct copy of the '575 Patent is attached hereto as Exhibit 4.

- 17. On October 30, 2012, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,299,476 ("the '476 Patent"), entitled "Light Emitting Diode Having Light Emitting Cell with Different Size and Light Emitting Device Thereof" to Lee *et al*. Seoul Viosys is the owner by assignment of the '476 Patent. A true and correct copy of the '476 Patent is attached hereto as Exhibit 5.
- 18. On August 3, 2010, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,768,020 ("the '020 Patent"), entitled "AC Light Emitting Diode" to Kim *et al.* Seoul Viosys is the owner by assignment of the '020 Patent. A true and correct copy of the '020 Patent is attached hereto as Exhibit 6.
- 19. On March 25, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,680,533 ("the '533 Patent"), entitled "Light-Emitting Device Having Light-Emitting Elements with a Shared Electrode" to Sakai *et al.* Seoul Semiconductor is the owner by assignment of the '533 Patent. A true and correct copy of the '533 Patent is attached hereto as Exhibit 7.
- 20. On May 31, 2011, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,951,626 ("the '626 Patent"), entitled "Light Emitting Device and Method of Manufacturing the Same" to Lee *et al.* Seoul Viosys is the owner by assignment of the '626 Patent. A true and correct copy of the '626 Patent is attached hereto as <u>Exhibit 8</u>.
- 21. On February 23, 2016, by the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,269,868 ("the '868 Patent"), entitled "Semiconductor Light Emitting Element and Method for Manufacturing Semiconductor Light Emitting Element" to Kushibe *et al.* Seoul Semiconductor is the owner by assignment of the '868 Patent. A true and correct copy of the 868 Patent is attached hereto as Exhibit 9.

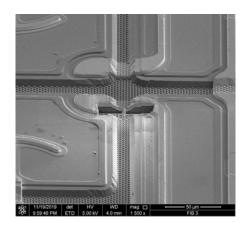
COUNT I

INFRINGEMENT OF THE '489 PATENT EXAMPLE CLAIMS 1

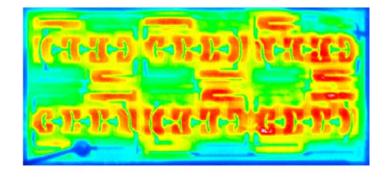
- 22. Satco has infringed and continues to infringe one or more claims of the '489 Patent, including but not limited to exemplary claim 1, pursuant to 35 U.S.C. § 271(a), at least by without authority making, using, offering to sell, and/or selling the S9152 LED lamp within the United States or importing the S9152 LED lamp into the United States.
- 23. The S9152 LED lamp includes a light emitting diode. A microscope image of an example light emitting diode is reproduced below.

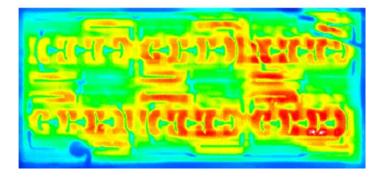


24. As shown in the image above, the light emitting diode includes a plurality of light emitting cells. In addition, the scanning electron microscope image below, which was created after processing with a focused ion beam, shows portions of a pair of adjacent light emitting cells arranged on a patterned substrate.



25. In order to separately assess the operation of an example light emitting diode during the forward and reverse cycles of an Alternating Current (AC), the below images were created. The first image was created during the application of a Direct Current (DC) in a first direction to indicate the portions of the light emitting diode that emit light. The second image was created during the application of a Direct Current (DC) in the opposite direction to indicate the portions of the light emitting diode that emit light. In both images, the units emitting light appear yellow-red and those that are not emitting light appear light green-sky blue.





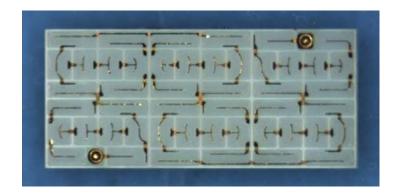
26. The above images indicate the presence of at least four half-wave light emitting units each comprising at least one light emitting cell. That there are at least four half-wave light emitting units is indicated by the units that are colored yellow-red in only one of the two images. Those units comprise light emitting cells that can emit light only during one direction of an AC cycle. And, for each of the at least four half-wave light emitting units, the gold lines in the above microscope image indicate the presence pairs of terminals arranged at the ends of those units.

- 27. The above images indicate the presence of at least two full-wave light emitting units each comprising at least one light emitting cell. That there are at least two full-wave light emitting units is indicated by the units that are colored yellow-red in both of the images. Those units comprise light emitting cells that can emit light during both directions of an AC cycle. And, for each of the at least two full-wave light emitting units, the gold lines in the above microscope images indicate the presence of pairs of terminals arranged at the ends of those units.
- 28. The gold lines in the above microscope images also indicate how the terminals of the light emitting cells are electrically connected. Taking the left-topmost full-wave light emitting unit as an example, the terminals (gold lines) are shown electrically connected to the terminals (gold lines) of four half-wave light emitting units, two to the top and two to the bottom of that full-wave light emitting unit.
- 29. Finally, the leftmost-middle light emitting half-wave unit in the microscope image is shown connected in series between full-wave light emitting units located above and below thereof. And the second from the left middle light emitting half-wave unit in the microscope image is shown connected in series between the full-wave light emitting units.
- 30. Satco's infringement has caused and is continuing to cause damage and irreparable injury to Plaintiffs. Plaintiffs will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court, as a remedy at law alone would be inadequate.
- 31. Plaintiffs are entitled to injunctive relief and damages in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

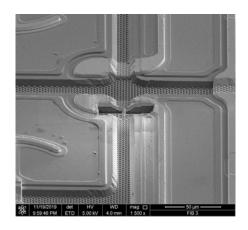
COUNT II

INFRINGEMENT OF THE '098 PATENT EXAMPLE CLAIMS 1

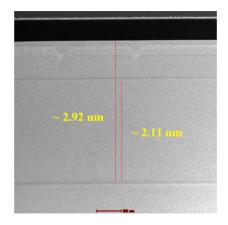
- 32. Satco has infringed and continues to infringe one or more claims of the '098 Patent, including but not limited to exemplary claim 1, pursuant to 35 U.S.C. § 271(a), at least by without authority making, using, offering to sell, and/or selling the S9152 LED lamp within the United States or importing the S9152 LED lamp into the United States.
- 33. The S9152 LED lamp includes a light emitting element. A microscope image of an example light emitting element is reproduced below.



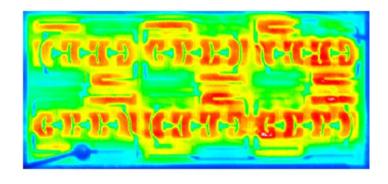
34. As shown in the image above, the light emitting element includes a plurality of light emitting cells. In addition, the scanning electron microscope image below, which was created after processing with a focused ion beam, shows portions of a pair of adjacent light emitting cells arranged on a patterned substrate.

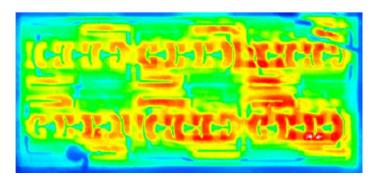


35. In order to analyze the structure of the light emitting cells, a tunneling electron microscope image (reproduced below) was created. This image shows in relevant part from bottom to top an N-type semiconductor layer, a multi-quantum well active layer, and a P-type semiconductor layer.



36. In order to separately assess the operation of an example light emitting diode during the forward and reverse cycles of an Alternating Current (AC), the below images were created. The first image was created during the application of a Direct Current (DC) in a first direction to indicate the portions of the light emitting diode that emit light. The second image was created during the application of a Direct Current (DC) in the opposite direction to indicate the portions of the light emitting diode that emit light. In both images, the units emitting light appear yellow-red and those that are not emitting light appear green-sky blue.



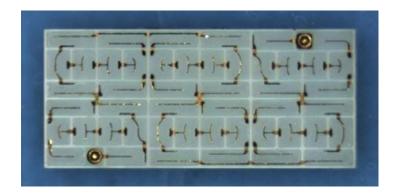


- 37. As indicated in the above images, a block of cells are shown emitting light under both forward bias and reverse bias. Those cells appear yellow-red in both images.
- 38. The above images also a block of cells that emit light only under forward bias or reverse bias. Those cells appear yellow-red in one of the images and green-sky blue in the other.
- 39. Satco's infringement has caused and is continuing to cause damage and irreparable injury to Plaintiffs. Plaintiffs will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court, as a remedy at law alone would be inadequate.
- 40. Plaintiffs are entitled to injunctive relief and damages in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

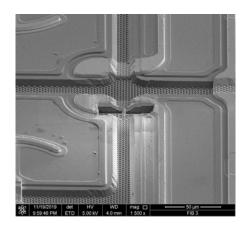
COUNT III

INFRINGEMENT OF THE '031 PATENT EXAMPLE CLAIMS 1

- 41. Satco has infringed and continues to infringe one or more claims of the '031 Patent, including but not limited to exemplary claim 1, pursuant to 35 U.S.C. § 271(a), at least by without authority making, using, offering to sell, and/or selling the S9152 LED lamp within the United States or importing the S9152 LED lamp into the United States.
- 42. The S9152 LED lamp includes a light emitting device. A microscope image of an example light emitting device is reproduced below.

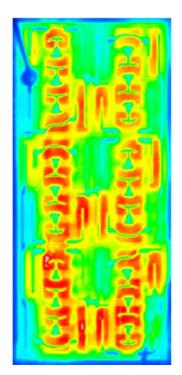


43. As shown in the image above, the light emitting device includes a plurality of light emitting elements. In addition, the scanning electron microscope image below, which was created after processing with a focused ion beam, shows portions of a pair of adjacent Gallium-Nitride-based light emitting elements arranged on a patterned insulating substrate.



44. The below images were created respectively by applying a Direct Current (DC) in a first direction and by applying a Direct Current (DC) in the opposite direction. In both images, the units emitting light appear yellow-red and those that are not emitting light appear green-sky blue. The gold lines of the microscope image indicate the terminals for the light emitting elements.



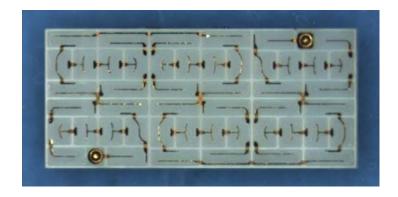


- 45. By following the pattern of light emitting cells that are emitting light in, for example, the left image above, a current path comprising at least three parts extending between from the left side of the device and the right side of the device can be seen starting in the upper left of the light emitting device.
- 46. Satco's infringement has caused and is continuing to cause damage and irreparable injury to Plaintiffs. Plaintiffs will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court, as a remedy at law alone would be inadequate.
- 47. Plaintiffs are entitled to injunctive relief and damages in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

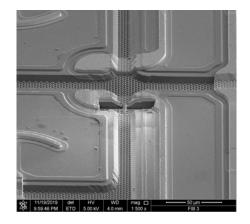
COUNT IV

INFRINGEMENT OF THE '575 PATENT EXAMPLE CLAIMS 13

- 48. Satco has infringed and continues to infringe one or more claims of the '575 Patent, including but not limited to exemplary claim 13, pursuant to 35 U.S.C. § 271(a), at least by without authority making, using, offering to sell, and/or selling the S9152 LED lamp within the United States or importing the S9152 LED lamp into the United States.
- 49. The S9152 LED lamp includes a light emitting diode. A microscope image of an example light emitting diode is reproduced below. At the bottom-left and top-right of the diode are a pair of bonding pads.



- 50. As shown in the image above, the light emitting diode includes a plurality of light emitting cells arranged in a matrix form. The matrix form comprises at least two arrays, each of which comprises at least two arrays. For example, a row of light emitting cells can be considered a one dimensional array, and multiple such rows can be considered an array of arrays.
- 51. The scanning electron microscope image below, which was created after processing with a focused ion beam, shows portions of a pair of adjacent light emitting cells arranged on a patterned substrate.



- 52. In the scanning electron microscope image of the top surface of the diode, the light colored lines indicate the wiring that provides the electrical connections between bonding pads and the light emitting cells. As the image shows, metal wire conductors connect each light emitting cell to either one or two adjacent light emitting cells. Some of the wires connect the n-electrode of a light emitting cell to the n-electrode of an adjacent light emitting cell and some connect the p-electrode of a light emitting cell to the n-electrode of an adjacent light emitting cell.
- 53. Satco's infringement has caused and is continuing to cause damage and irreparable injury to Plaintiffs. Plaintiffs will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court, as a remedy at law alone would be inadequate.
- 54. Plaintiffs are entitled to injunctive relief and damages in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

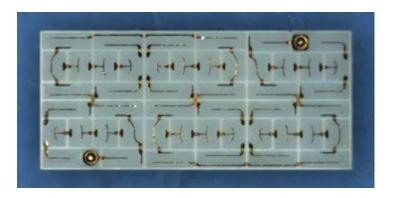
COUNT V

INFRINGEMENT OF THE '476 PATENT EXAMPLE CLAIMS 1

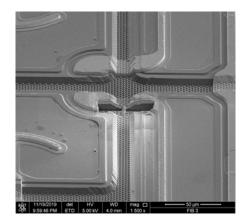
55. Satco has infringed and continues to infringe one or more claims of the '575 Patent, including but not limited to exemplary claim 1, pursuant to 35 U.S.C. § 271(a), at least by

without authority making, using, offering to sell, and/or selling the S9152 LED lamp within the United States or importing the S9152 LED lamp into the United States.

56. The S9152 LED lamp includes a nitride-based light emitting diode configured to be operated under alternating current (AC) power. A microscope image of an example light emitting diode is reproduced below.

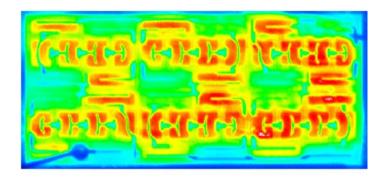


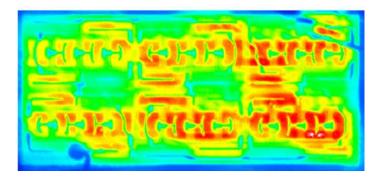
57. As shown in the image above, the light emitting diode includes a plurality of spaced-apart light emitting cells. The scanning electron microscope image below, which was created after processing with a focused ion beam, shows portions of a pair of adjacent light emitting cells arranged on a patterned substrate.



58. The microscope image of the top surface shows that the light emitting cells comprise different sizes. And by providing different sized cells, the current densities within those cells under AC power are also different.

59. The series connection of the light emitting cells can be understood based on the images of an example diode under forward and backwards direct current, which simulates the conditions under the forward and backward phases of alternating current. In particular, the arrangement of lit (yellow-red) and unlit (green-sky blue) cells, which are connected together by metal wires indicate series connections.





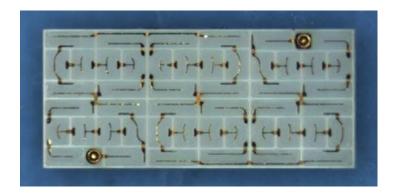
- 60. Satco's infringement has caused and is continuing to cause damage and irreparable injury to Plaintiffs. Plaintiffs will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court, as a remedy at law alone would be inadequate.
- 61. Plaintiffs are entitled to injunctive relief and damages in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

COUNT VI

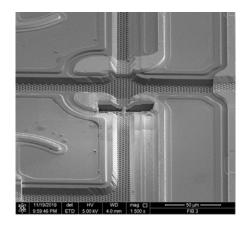
INFRINGEMENT OF THE '020 PATENT EXAMPLE CLAIMS 1

- 62. Satco has infringed and continues to infringe one or more claims of the '020 Patent, including but not limited to exemplary claim 1, pursuant to 35 U.S.C. § 271(a), at least by without authority making, using, offering to sell, and/or selling the S9152 LED lamp within the United States or importing the S9152 LED lamp into the United States.
- 63. The S9152 LED lamp includes an alternating current (AC) light emitting diode.

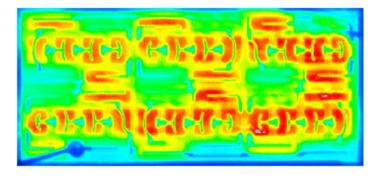
 A microscope image of an example light emitting diode is reproduced below.

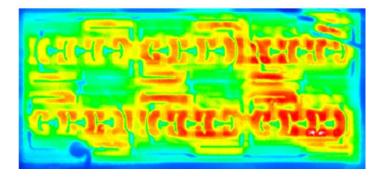


64. As shown in the image above, the light emitting diode includes a plurality of light emitting cells. The scanning electron microscope image below, which was created after processing with a focused ion beam, shows portions of a pair of adjacent light emitting cells arranged on a patterned substrate.



- 65. The microscope image of the top surface shows gold colored lines, which comprise wires that connect the light emitting cells to one another. The same image also shows the light emitting cells as spaced apart from each other. Those spacing between adjacent cells is larger than 10µm and less than 30µm.
- 66. The series connection of the light emitting cells can be understood based on the images of an example diode under forward and backwards direct current, which simulates the conditions under the forward and backward phases of alternating current. In particular, the arrangement of lit (yellow-red) and unlit (green-sky blue) cells, which are connected together by metal wires indicate series connections.





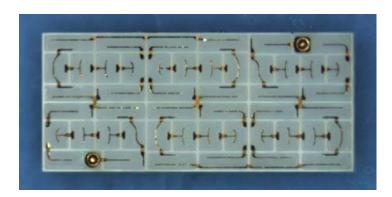
67. Satco's infringement has caused and is continuing to cause damage and irreparable injury to Plaintiffs. Plaintiffs will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court, as a remedy at law alone would be inadequate.

68. Plaintiffs are entitled to injunctive relief and damages in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

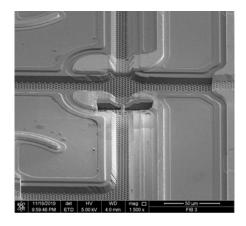
COUNT VII

INFRINGEMENT OF THE '553 PATENT EXAMPLE CLAIMS 8

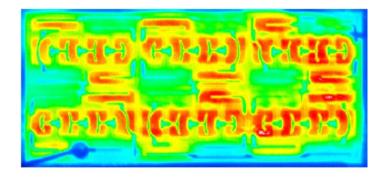
- 69. Satco has infringed and continues to infringe one or more claims of the '553 Patent, including but not limited to exemplary claim 8, pursuant to 35 U.S.C. § 271(a), at least by without authority making, using, offering to sell, and/or selling the S9152 LED lamp within the United States or importing the S9152 LED lamp into the United States.
- 70. The S9152 LED lamp includes a light emitting device configured to be driven by an alternating current (AC) power supply. A microscope image of an example light emitting device is reproduced below.

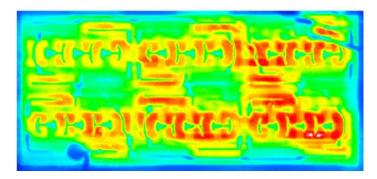


As shown in the image above, the light emitting device includes a plurality of light emitting elements spaced apart from each other. The light emitting elements are Gallium Nitride based. The scanning electron microscope image below, which was created after processing with a focused ion beam, shows portions of a pair of adjacent light emitting elements formed together on a patterned insulating substrate.



72. The electrode connections of the light emitting cells can be understood based on the images of an example device under forward and backwards direct current, which simulates the conditions under the forward and backward phases of alternating current. In particular, the image shows lit (yellow-red) and unlit (green-sky blue) cells connected together by metal wires and electrodes. The metal electrodes and wires appear instead as gold lines in the microscope images above.





73. As the images above show, a number of the light emitting elements are provided as pairs with commonly connected anodes or cathodes. For the paired light emitting elements

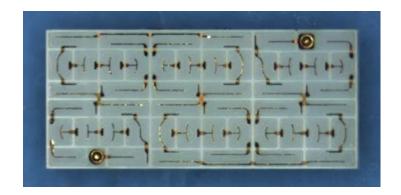
having commonly connected anodes or cathodes, one of those light emitting elements will emit light only during a first cycle of the AC power supply and its pair will emit light only during the other cycle of the AC power supply.

- 74. Satco's infringement has caused and is continuing to cause damage and irreparable injury to Plaintiffs. Plaintiffs will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court, as a remedy at law alone would be inadequate.
- 75. Plaintiffs are entitled to injunctive relief and damages in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

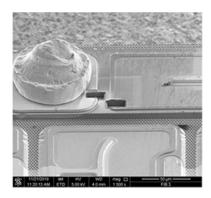
COUNT VIII

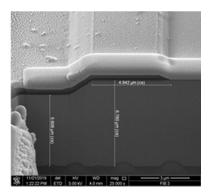
INFRINGEMENT OF THE '626 PATENT EXAMPLE CLAIMS 9

- On information and belief, Satco has infringed and continues to infringe at least exemplary claim 9 of the '626 Patent pursuant to 35 U.S.C. § 271(g) at least by without authority importing into the United States or offering to sell, selling, and/or using within the United States the S9152 LED lamp, which on information and belief are made by a process that infringes that claim and are not materially changed by subsequent processes and do not become a trivial and nonessential component of another product.
- 77. The S9152 LED lamp includes a light emitting device. A microscope image of an example light emitting device is reproduced below.



As shown in the scanning electron microscope images below, which were created after milling a hole in the light emitting device near the n-pad, a mesa having a sloped edge exists at the surface of the light emitting device. The mesa comprises a layer of p-type material toward the top, an active layer under the p-type layer, and a layer of -type material under the active layer. The patterned sapphire substrate can be seen at the bottom of the image below right.





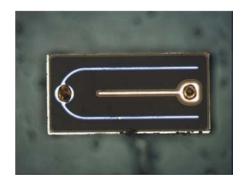
- 79. In view of the angular slope of the mesa edge, and upon information and belief regarding the process used to manufacture the light emitting device, the mesa edge shape was created by forming an etching pattern on the surface, hard-baking the photoresist to create an inclined edge, and etching the photoresist and portions of the surface.
- 80. Satco's infringement has caused and is continuing to cause damage and irreparable injury to Plaintiffs. Plaintiffs will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court, as a remedy at law alone would be inadequate.

81. Plaintiffs are entitled to injunctive relief and damages in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

COUNT IX

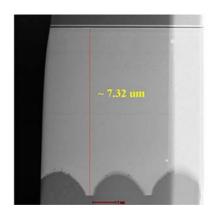
INFRINGEMENT OF THE '868 PATENT EXAMPLE CLAIMS 1

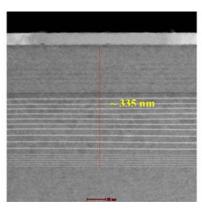
- 82. Satco has infringed and continues to infringe one or more claims of the '868 Patent, including but not limited to exemplary claim 1, pursuant to 35 U.S.C. § 271(a), at least by without authority making, using, offering to sell, and/or selling the S9152 LED lamp within the United States or importing the S9542 LED lamp into the United States.
- 83. The S9542 LED lamp includes a semiconductor light emitting element. A microscope image of an example light emitting element is reproduced below.

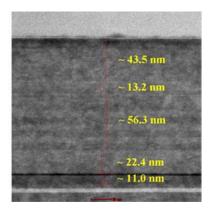


84. Three transmission electron microscope images of the light emitting element are reproduced below. The image below left shows the full epi-structure above a patterned sapphire substrate. The center image indicates a plurality of layers including from bottom to top an n-type semiconductor layer, a light emitting unit, and a p-type semiconductor layer. The image below right focusses in on the p-type semiconductor layer. As the image shows, a number of layers as described above located below the p-type semiconductor layer, with the relative brightness of each layer correlating with the dopant concentration. From bottom to top, the layers include a first layer, a second layer, and a third layer, each of which has different levels of the Magnesium doping, the

first layer with relatively low Magnesium doping, the second layer with relatively high Magnesium doping, and the third layer with relatively intermediate Magnesium doping







- 85. Satco's infringement has caused and is continuing to cause damage and irreparable injury to Plaintiffs. Plaintiffs will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court, as a remedy at law alone would be inadequate.
- 86. Plaintiffs are entitled to injunctive relief and damages in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs respectfully requests that this Court enter judgment in their favor and against Satco as follows:

- A. A declaration that Satco has infringed the '489 Patent, '098 Patent, '031 Patent, '575 Patent, '476 Patent, '020 Patent, '533 Patent, '626 Patent, and '868 Patent under 35 U.S.C. § 271, and a final judgment incorporating the same;
- B. A permanent injunction, enjoining Satco and its officers, agents, servants, employees, representatives, successors, and assigns, and all others acting in concert or participation with them from continued infringement under 35 U.S.C. § 271 of the '489 Patent,

'098 Patent, '031 Patent, '575 Patent, '476 Patent, '020 Patent, '533 Patent, '626 Patent, and '868

Patent;

C. An award of damages adequate to compensate Plaintiffs for Satco's

infringement the '489 Patent, '098 Patent, '031 Patent, '575 Patent, '476 Patent, '020 Patent, '533

Patent, '626 Patent, and '868 Patent, together with prejudgment and post-judgment interest and

costs pursuant to 35 U.S.C. § 284;

D. An accounting of all infringing sales and other infringing acts by Satco, and an

order compelling an accounting for infringing acts not presented at trial and an award by the Court

of additional damages for such acts; and

E. Any other relief to which Plaintiffs are entitled or that the Court seems just and

proper.

DATED: November 27, 2019

Respectfully submitted,

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SEOUL VIOSYS CO., LTD.